

IN THE CLAIMS:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) In a plasma processing apparatus provided with an inductive coupled electrode for generating plasma in a vacuum processing chamber, the plasma processing apparatus wherein:

said electrode is formed ~~by a conductive line-shaped member whose~~ so that total length thereof is substantially equal to a wavelength of a supplied high frequency power, and is formed so that;

one end of said electrode is grounded and another end thereof is connected to a high frequency power source for supplying said high frequency power, and a standing wave of one wavelength is produced along said electrode when said high frequency power source supplies said high frequency power to said electrode; and

a node of said standing wave produced along said electrode is formed at a central portion of said electrode, and an antinode of said standing wave is formed on both portions respectively corresponding to a half portion of said electrode, which exist at both sides of said center point, wherein

said electrode is formed to be U-shaped by having a bended-back portion at said central portion,

each of the half portions of said electrode corresponds to a straight portion,

both of the half portions are arranged in parallel, and a length of the half portion of said electrode is substantially equal to a half of the wavelength of said high frequency power, and

the length of the half portion of said electrode is about one order of magnitude longer than a width between the half portions.

2-4. (Cancelled)

5. (Currently Amended) In a plasma processing apparatus provided with an inductive coupled electrode for generating plasma in a vacuum processing chamber, the plasma processing apparatus wherein:

said electrode is formed ~~by a conductive line shaped member whose~~ so that total length is determined to natural number times of a half of a wavelength of a supplied high frequency power, and is formed so that;

one end of said electrode is grounded and another end thereof is connected to a high frequency power source for supplying said high frequency power, and standing waves are produced along said electrode when said high frequency power source supplies said high frequency to said electrode; and

a node of said standing waves produced along said electrode is formed at a central portion of said electrode, and at least one antinode of said standing waves is formed on both portions respectively corresponding to a half portion of said electrode, which existing at both sides of said center point, wherein

said electrode is formed to be U-shaped by having a bended-back portion at said central portion,

each of the half portions of said electrode is a straight portion, both of the half portions are arranged in parallel,

said node of said standing wave is consistent with a bending back point, and

the length of the half portion of said electrode is about one order of magnitude longer than a width between the half portions.

6. (Cancelled)

7. (Previously Amended) A plasma processing apparatus as set forth in claim 5, wherein a plurality of said electrodes are arranged to make a stratified structure comprising a

plurality of layers within said vacuum processing chamber, a plurality of film depositing regions are produced using a space between said electrodes included in said plurality of layers, and film deposition on a substrate is performed in each of said plurality of film depositing regions.